Diamant

User Manual

EXPOBAR®

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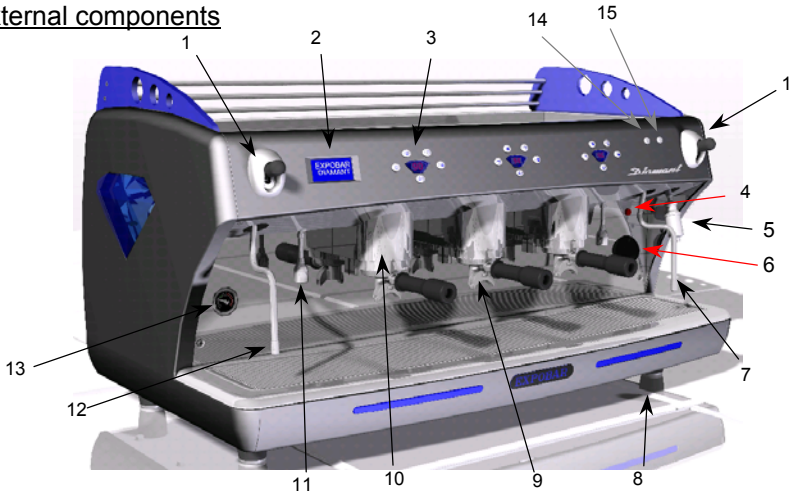
External components



1	Steam lever	8	Adjustable leg
2	Display	9	Porta filter
3	Electronic Control Panel	10	Brewing group
4	Heat element light	11	Hot water outlet (x2)
5	Capuccinator	12	Steam wand
6	Main Switch	13	Pump manometer
7	Steam wand with temperature probe	14	Steam button
		15	Water button

Characteristics

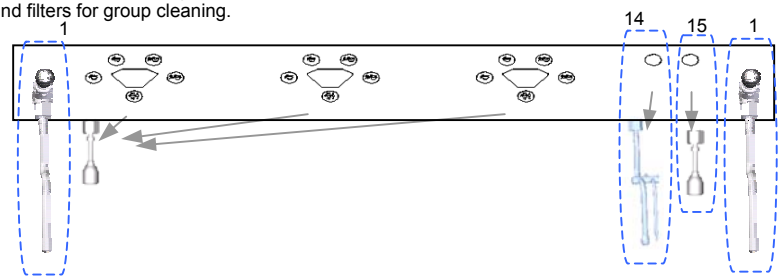
							Heat element power (Watts) (depending on option)					
Models	**Group Nr.**	**Dimensions (mm) Width**	**Depth**	**Heigth**	**Weigth (kg) without water nor portas**	**Boiler Litres**	**230-s-Ph 50/60_Hz (3_wires)**	**2Ph380+N * 3ph230, 2p230, 230 sph (4 wires**	**125-sPh 50/60 Hz (3 wires)**	**3F380+N 5 wires**	**3F230 4 wires**
2 Groups	2	880	630	600	81	11,5	**3050**	3050		4500	4500
2 Groups 3 Boiler	2	880	630	600	88	11,5+2x1,5	**4500/2x1200**			4500 / 2x1200	4500 / 2x1200
3 Groups	3	1080	630	600	97	17,5		**4000**		6000	6000
3 Groups 4 Boiler	3	1080	630	600	97	17,5+3x1,5				6000 / 3x1200	6000 / 3x1200
Total Power = Heat element power + 200 W											

(*) The machine is ready for different final electrical set ups: This very same machine can be connected to: 3 Phase 380 (2Ph380+N), 3 phase 220 (3ph220 or 2ph220) & single phase 230.
Note1: 4500/2x1200 W means that the machine does never connect simultaneously all of its heating elements simultaneously; wether it activates the 3050W heat element, or the other 2 of 1200W; but never at the same time. So for power calculation consider the maximum heat power consumption (4500W in this case). Take this into account in the case of the 6000/3x1200 W case.
Note2: Consult the characteristics plate on your machine as to know which model the machine belongs to.
Note3: The number of wires shows the number of conductors in the connection cable of the machine.

Included accessories

2 complete porta-filters for 2 cups, in the 2 groups machine.
3 complete porta-filters for 2 cups, in the 3 groups machine.
+ 1 complete porta-filters for 1 cup.
+ 1 water hose ½ meter long.
+ 2 blind filters for group cleaning.

Controls



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READ CAREFULLY THIS INSTRUCTION MANUAL PRIOR TO INSTALL OR OPERATE THE ESPRESSO MACHINE

3. Machine instalation

When installing the machine on its cabinet, it should be as horizontal as possible (use its adjustable foots to achieve it), so the coffee will come out evenly to the cups, through all the spouts of each group.

3.1. Electrical installation:

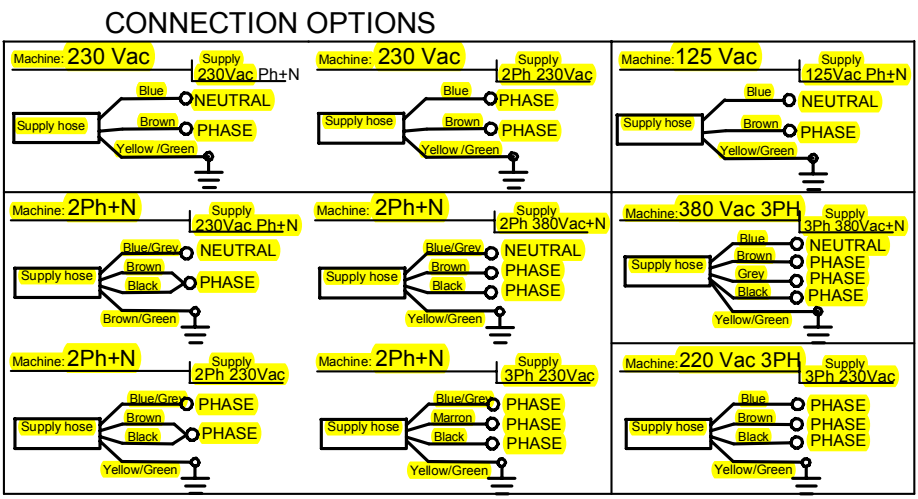
Wiring of coffee machine must be done by qualified staff, always following the safety instructions:

- Before plug in the machine, make sure the voltage of the supply mains corresponds to the ratings indicated on the nameplate featuring the appliance's technical data.
- The wall socket must be equipped with an earth contact. Make sure the earth system is efficient and in conformity with current safety rules. It is compulsory to earth the machine.
- You should protect the electric line of the installation with a magnetothermic switch appropriated for the power consumption of the machine, specified on its nameplate.
- A residual current circuit breaker must be installed in accordance with the characteristics of the installation.
- Check the characteristics & rating of the system and that the diameter of the cables are suitable for the power absorbed by the machine.
- Do not use any extension cable or plug adapter, nor multiple wall sockets.

The manufacturer is not liable for the injuries or damages on people and/or animals, as well as damages on equipment, caused by a improper installation of the coffee machine.

3.2. Connection options

Consult the nameplate on your machine as to know which is the electrical characteristics of the machine type that you have. Depending on it, you can connect your machine as follow:



3.3. Hydraulic instalation:

Using the flexible hose provided with the machine, connect it to a stainless connection hose 3/8" male, with by-pass valve. **Placement of a water softener filter between the valve and the machine is compulsory** (among all the spare parts you should have another flexible hose of 50 cm in order to connect both water softener filter and valve).

4. Filling up the boiler

In this kind of machines the filling is automatic; the machine will fill the boiler by itself

5. First Start up

1. Open the external supply of water to the machine.
2. Turn on the main power switch.
3. Open the steam tap, until steam comes out. This way we will evacuate the remaining air that could be trapped in the boiler.

"The red pilot, shows us the machine is heating-up. Once it turns OFF, it means the machine has reached the ideal temperature".

4. Press the one selection on the control panel on each group, until water comes out continuously from each of them. This way the heat exchangers of the machine will be correctly filled.

5.1. The portafilter set

1. Tension spring (Filter basket)
2. Placemnent of tensión spring.
3. Placing portafilter tension spring.

Porta-filter & filter basket for 2 espresso dosis

Porta-filter & filter basket for 1 espresso dosis

5.2. Portafilter locking into the group

The porta-filter has two little wings at each side; these ones must be aligned with the screw slots in the group. Then turn the porta counter-clock wise till the porta-filter handle is perpendicular to the espresso machine.

CORRECT POSITION OF THE PORTA-FILTER IN THE GROUP

CORRECT

NOT INSERTED ENOUGH

THE GROUP JOINT IS WORN OUT

5.3. Espresso brewing

a) Unlock and remove the porta - filter from the group head.

b) Fill the basket filter of the porta-filter with the right amount of coffee (it will depend on the filter's basket size). For best results use freshly grinded coffee.

c) Press down the coffee with the coffee tamper.

d) Insert the filled porta – filter into the group head, and lock it in; be sure that it is correctly locked in place. Place one /two cup beneath the spout.

e) Select the desired option from the switchboard, if yours is an electronic machine, or turn on the brew switch (in pulser models).

KEEP ALWAYS THE PORTAFILTER INSERTED IN THE GROUPHEAD TO KEEP IT WARM. This is very important to maintain it in an optimal temperature as to get the best espresso.

5.4. Heating-up liquids

a) Place the steam wand over the tray and open a bit the steamer knob, in order to allow condensed water drops to be ejected.
b) Close the steam knob.
c) Immerse the steam wand in the liquid to be heated up.
d) Open up the steam knob so it will start to heat the liquid (with tap open, do not take the wand out of the liquid until closed, you could be injured with projected water). Once finished the process close the tap and remove the liquid container.
e) Once finished the process, orient the steam wand over the drip tray and open up the steam knob to clean leftovers of milk or other liquids, inside the steamer. Close the knob and clean the outside of the steamer with a damp cloth.

5.5. Hot water for infusions

- Place a recipient under the water tap, where you want to get the hot water.
- Open the water knob,
- Close the water knob when reached the desired volume of water.

6. Cleaning of the espresso machine

Remember, as to get the best performance from the machine, descale and cleaning are to be observed. Disconnect the machine from the main supply prior to cleaning the machine. All the body exterior can be cleaned with a damp cloth. Do not use abrasive or dissolvent products.

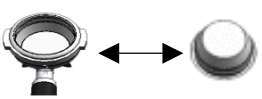
6.1. Cleaning of group

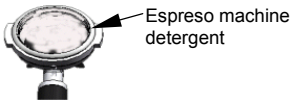
a) Unlock & remove the porta filter from the group head.
b) Re-place the filter basket of the porta filter with one of the provided blind filter baskets.
c) Insert a sachet of detergent into the porta filter. You must use specific detergents for this kind of cleaning, specific for the cleaning of the group of espresso machines.
d) Lock the porta filter into the group head.
e) Activate the auto-cleaning cycle as follows: With the machine in "ON" status, press simultaneously the button "continuous" and the "2 short espressos" button. Now you can release the buttons; the auto-cleaning will automatically repeat a cleaning cycle.

Important: Once finished the cleaning process, remove the porta filter and run water through the group again to rinse out all remains. Repeat the cleaning process this time without detergent for a perfect removal of any remains of the cleaning product. Finally re-install the original filter basket on the porta-filter, and store the blind one.

"DO NOT MANIPULATE THE PORTA FILTER DURING THE AUTO - CLEANING PROCESS".

Cleaning the groups everyday with the filter membrane but without detergent is recommended.
Cleaning the groups with the blind filter basket and detergent is recommended once a week.





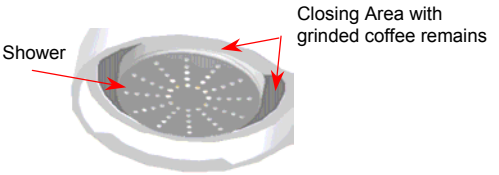
6.2. Cleaning of gasket & shower

When attaching the porta-filter filled with grinded coffee into the brewing group, left overs accumulate in the closing surface. These remains if excessive can prevent a good closing between the porta-filter an the brewing group. Moreover, these remains can even block the output of water through the group.
The solution for this is cleaning:

- Place on the filter basket the blind membrane filter, without detergent.
- Place the porta-filter in the brewing group, without attempting to close it. IT MUST BE LOOSE.
- Connect a continuous espresso (switching or selecting).
- Make an opening - closing movement of the porta in place, without closing it. Water will flow around the porta filter, flowing through the closing surface, cleaning it. Be very careful, as this water is very hot, and can cause burns.

6.3. Shower cleaning

With a scouring pad, whip the shower's area both interior, and exteriorly.

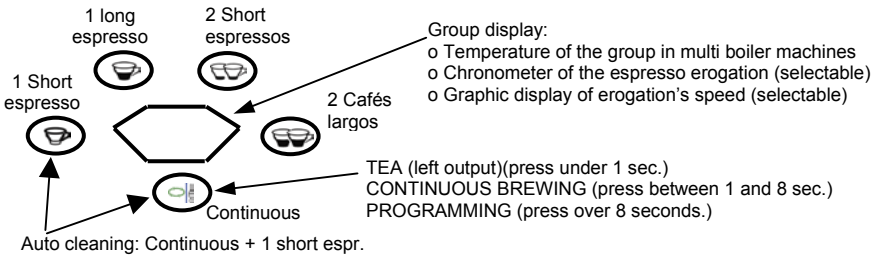


7. Electronic control panel

Here some of the additional functions that the electronics offers:

- Volumetric control of four different espresso doses per brewing group.
- Time-controlled hot water dose's control.
- Automatic filling and level control of the boiler.
- Automatic switch off of the heating element if not enough water. (on customer's request)
- System´s supervision through alarms.
- Serial connection RS-232 with data-reading devices from the control panel to the computer.
- Brewing group auto-cleaning.

The control panel is by default programmed with 4 standard doses (these can be re-programmed as your wish) and a continuous selection. The first four keys (1 short espresso – 1 long espresso – 2 short espressos – 2 long espressos) brew the programmed amounts and then stop automatically; the fifth one brews without stopping by itself.


1 long espresso
2 Short espressos
1 Short espresso
2 Cafés largos
Group display:
o Temperature of the group in multi boiler machines
o Chronometer of the espresso erogation (selectable)
o Graphic display of erogation's speed (selectable)
TEA (left output)(press under 1 sec.)
CONTINUOUS BREWING (press between 1 and 8 sec.)
PROGRAMMING (press over 8 seconds.)
Continuous
Auto cleaning: Continuous + 1 short espr.

The continuous button, depending on the duration of the pressing, has 3 functions:

- Less than 1 sec.: Activates the hot water for infusions dosing.
- Between 1 and 8 secs.: Continuous espresso output; in order to stop it, we must press the button again.
- Over 8 secs: Entry in the programming menu. This is explained in the next paragraph.

7.1. Programming dosage of the control panel

Here we will program the volume of the coffee doses that will be automatically brewed by each selection on the keypad.

- Keep pressed over 8 seconds the button of continuous coffee: all the lights in the keypad will light, but the light of the continuous coffee will flash.
- Within 5 seconds press the button of the coffee selection to be re-programmed (1 short espresso - 1 long espresso – 2 short espressos – 2 long espressos). Notice that all the lights will switch off, except the one of the option selected and the one of continuous brewing.
- The group begins brewing the espresso. When the desired volume of espresso brewed is reached, press again the selection, and this volume will be stored as the programmed dosis.
- Repeat the process with all the other selections that need re-programming. Whenever we have re-programmed each selection, its corresponding light will come off.

Each dosis re-programming must be done with fresh grinded coffee, each time.

In case only one of the selections is to be reprogrammed, act as previously described, re-programming only the one desired; remaining buttons will keep the existing programmed dosis.

Very important: When you re-program any dosis in the left keypad (facing to the machine), this dosis will be stored in every other keypad. This is: If for example we modify the dosis of the 1 short espresso in the left keypad, automatically this newly memorized new dosis will be stored in all the other keypads.
This only happens with the left keypad; if we modify the dosis on any other, it will not overwrite any other.

7.1.1. Example of 1 short coffee programming

Unlock the porta filter from the machine and fill it with fresh ground coffee. Lock it into the brewing group head, place one cup beneath the spout. Press the "*" key pad and keep it pressed for over 8 seconds, until all the green lights are simultaneously flashing. Then press the "short coffee key" pad, and you will see all the green lights switch off, except the option you have selected one of continuous brewing. The machine will start brewing. When the required coffee dose is reached, press the "short coffee key" pad. The light of this option will turn off. This means that programming of this option has been successful. You can re-program again any dosis, or just wait for the electronics to come back to normal status and the lights of the keypad to turn off.

7.2. Programming the doses for hot water for infusions

- Keep pressed over 8 seconds the continuous espresso key, till all the lights turn on, except the ones of continuous espresso, that will flash.
- Press the continuous key for less than 1 second. Water will begin to come out from the hot water wand.
- Press again the same key; the water will stop and the new doses will be stored.

Different water amounts can be stored in each keypad.

7.3. Programming the doses for the electronic steam wand

- Keep pressed over 8 seconds the continuous espresso key, till all the lights turn on, except the ones of continuous espresso, that will flash.
- Immerse the steam wand in the liquid to be heated up.
- Press the steam button.
- When the liquid reaches the desired temperature, press again the steam button. The new doses is then stored.

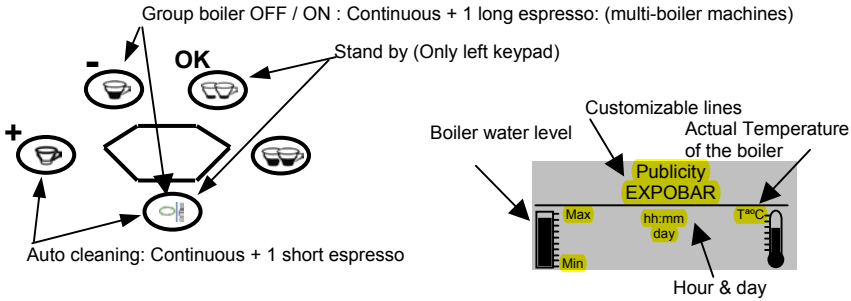
When adjusting the dose as already explained, what will be controlled will not be the time steaming, but the temperature of the liquid being heated up. This means, that once adjusted the doses of the electronic Steam wand with temperature probe, the machine will steam up the liquids stopping always at the very same temperature measured on the liquid being heated, independently from the volume of liquid being heated up.

7.4. Maximum security time

Every selection has a maximum allowed time for brewing of 5 minutes.

8. Aditional capabilities reachable from the display

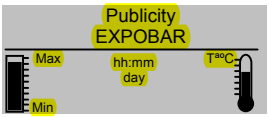
- Automatic daily switch ON/OFF; “Stand by” function.
- Time management: Current day and time.
- Advertising display.
- Digital control and visualization of the temperature of the boiler through the display.
- Maximum control of temperature in the boiler through PID technology.
- On-display help for re-programming and adjusting.
- Visual alarm to warn about the need of regeneration of the water softener filter.



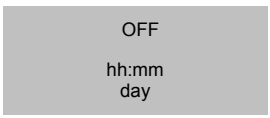
8.1. Espresso machine status

The espresso machine has 3 possible status:

- *ON* status: The machine is active and ready for brewing espresso. Generally when switching on the main switch, the machine will enter this status.



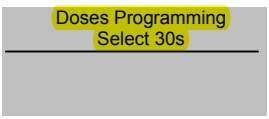
stand by Status. The main switch is ON, but the espresso machine is off, and this is shown in the display. – To arrive to this status, being the machine with the main switch ON, and the machine in ON status, press the continuous key, and without releasing it, press the 2 short coffees key. The machine will show “OFF” on the display. To get out from this status, press the 2 short espressos, the machine will come back to the ON status.



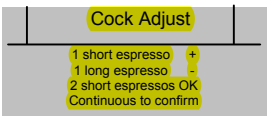
- OFF status. The espresso machine is totally disconnected.

8.2. Access to additional menus

- Keep pressed over 8 seconds the continuous espresso key on the left keypad.
- (Entering programming). Now all the keypad lights will light up continuously, but the one of continuous erogation that will flash intermittently. At this point of the menu, we can adjust the volumes of the different dosis of each selection, as explained in previous point ***7.1 “Programming dosage of the control panel”***. In the display will appear the message shown.

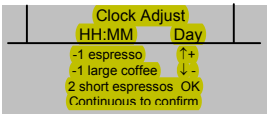


- Now, press again the continuous button on the left keypad, until the display shows “Clock adjust” on the display: From this point we get access to the different settings. – Enter this menu by pressing the button “two short coffees” (OK).



8.3. Clock adjust: adjusting hour, minutes and day.

Once pressed the button “two short coffees” (OK) while “Clock adjust” was displayed, the adjusting of the clock begins.



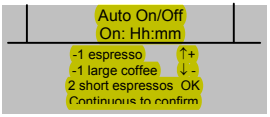
- Adjust the hour: while the hour is blinking, increase or decrease its value by pressing “+” (one short espresso) or “-“ (one large coffee). When the right value is reached, accept it by pressing “OK” (two short espressos). Then it begins with the minutes adjusting.

- While the minutes are blinking, we can increase or decrease its value by pressing “+” (one short espresso) or “-“ (one large coffee). When the right value is reached, accept it by pressing “OK” (two short espressos). Then the day of the week can be adjusted in the very same way (“+”, “-“ & “OK”).

After having adjusted all previous values, when pressing “OK” (two short espressos) the “Auto On” / “Auto Off” menus are shown.

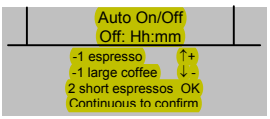
8.4. Auto On/off:

After accepting the adjusting made in the time & day by pressing “OK” (two short coffees), we enter in the programming of the automatic connection and disconnection of the machine.



- As to modify the time at which the machine automatically gets into the “ON” status: While the hour is blinking, , increase or decrease its value by pressing “+” (one short espresso) or “-“ (one large coffee). When the right value is reached, accept it by pressing “OK” (two short espressos). Then the minutes will blink, and will be adjustable in the same way than the hour (“+”, “-“ & “Ok”).

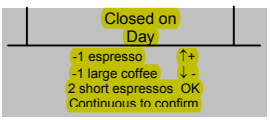
- Note: By default, this first value will be: On: - - : - - this means that the function is disabled. As soon as we modify the value, and it become different from - - : - - the function will be enabled. If we prefer to leave this function disabled, just accept by pressing “OK” while the adjusted value is - - : - - .



- Now, while the auto-disconnection time blinks, increase or decrease its value by pressing “+” (one short espresso) or “-“ (one large coffee). When the right value is reached, accept it by pressing “OK” (two short espressos). Then the minutes will blink, and will be adjustable in the same way than the hour (“+”, “-“ & “Ok”). With this final acceptance, we will proceed to the next adjusting menu.

8.5. Day Off adjustment:

If automatic On and Off times have been assigned, a day off can be enabled in which the machine will not switch on: the day off.
Note that if the function of Auto On/Off was not enabled, this menu will not appear.
To adjust the day Off, press “+” (one short espresso) or “-“ (one large coffees, as needed, till reaching the desired value; then accept it by pressing “OK” (two short espressos).



- Note: By default, this setting will be: - - : - - this means that the function is disabled. As soon as we modify the value, and it become different from - - : - - the function will be enabled. If we prefer to leave this function disabled, just accept by pressing “OK”(two short espressos) while the adjusted value is - - : - -

9. Possible anomalies

9.1. Failures produced by lime:

- **The coffee does not come out at a appropriate temperature:**

- The outlet tubes of heat exchangers are clogged by lime.

- **Water does not come out from the groups:**

- Lime blocks the water getting through .

Ninety percent of failures are caused by scale build-up in the machine when none water treatment operation is done. Is very easy to avoid this kind of failure by doing decalcifying.

9.2. Problems due to grind setting:

- **Coffee comes out very fast:**

- Adjust the grinder setting, the grind is too coarse.

- **Coffee comes out very slow:**

- Adjust the grinder setting, the grind is too fine.

If you observe any malfunctioning in the coffee machine contact the technical service.

10. Recommendations

- You should clean every day the group without soap, only with the blind membrane / filter basket and water.
- You should clean the group with espresso detergent (as described in this manual), at least once a month.
- You should regularly re-generate the water softener device.
- Use freshly grinded coffee as to preserve the properties, aroma and flavor of the moment the coffee is used.
- In order to obtain a good expresso coffee, remember that both the brewing group and the portafilter must be hot and at a constant temperature; so keep the portafilter placed in every moment into the group.

11. Cautions

- When you are brewing espresso do not attempt to take out the porta-filter. Boiling water at high pressure could be projected and cause you burns.
- Never manipulate the inside of the machine; this must be done only by authorized technicians.
- Do not insert any kind of things inside the openings & ventilation holes of the machine.
- Check frequently the drip tray water sink .
- Do not allow children to use or touch the machine; it has hot surfaces that could cause them burns.
- Do not use the machine with wet hands, wet feet or barefoot.
- If you want to disconnect the machine from the electrical outlet, do not pull from the wire; remove it by pulling from the electrical plug.
- If you have any problem contact the technical service.

The manufacturer holds the rights to modify the machine without prior announcement.